

Biological Control Work Plan for Calendar Year 2018

Cooperator:	Kansas Department of Agriculture, Plant Protection and Weed Control	
State:	Kansas	
Project Title:	Spotted Knapweed (<i>Centaurea stoebe</i> L.) Survey for Biological Control	
Project Coordinator:	Scott Marsh	
Agreement Number	USDA-APHIS-10025-PPQFO000-18-0068	
Contact Information:	Address: 6531 SE Forbes Ave., Ste. B Topeka, B KS 66619	
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	Email Address: scott.marsh@ks.gov	

BACKGROUND INFORMATION

A. Provide a brief description of the issue

Spotted knapweed is an invasive biannual weed that invades cropland, pastures, fallow ground, and non-crop areas. Considering spotted knapweed is also a substantial problem in neighboring states, Kansas has listed spotted knapweed on its Invasive Weed Watch List. In 2016, Kansas ranked in the United States number one in wheat and sorghum production, 6th in sunflower, 6th in canola, 6th for forage, 7th in corn, 9th in oats and 10th in soybeans demonstrating Kansas' importance to US agriculture. Preventing the spread of invasive species, like spotted knapweed, becomes a priority so that Kansas agriculture does not suffer. Several infestations of spotted knapweed are known to exist in Kansas, but for the most part an extensive survey has not been completed recently. Understanding where spotted knapweed exists is crucial to controlling the spread of this invasive species. In addition, an integrated weed management approach combines the efforts of several weed management practices including chemical, biological, and mechanical. Combining these efforts will result in better weed management than chemical alone. Subsequently, to keep the spotted knapweed population in Kansas in check, it has become important to pursue various control approaches, including biological control.

B. Indicate

Is this a new project? ☒ YES ☐ NO

Is this a continuation of a previously funded agreement? ☐ YES ☒ NO. If yes, have all progress reports been submitted? Explain.

OBJECTIVES, NEED FOR ASSISTANCE, BENEFITS EXPECTED**A. Specific Objectives of the Project (List if more than one)**

- Survey for spotted knapweed in the northeast part of Kansas to determine the extent of populations in Kansas. This will be at least a two year project.
- In the 2nd survey season (2019) release *Larinus minutus* and *Cyphocleonus achates* for biological control on spotted knapweed infestations found during the 2018 survey season.
- Monitor *Larinus minutus* and *Cyphocleonus achates* populations and spotted knapweed population after release.

B. Justify how the funding will facilitate the cooperator in carrying a Biological Control Project that targets a pest of concern to APHIS

Spotted knapweed is a species of concern for APHIS and has historically been funded for biological control programs. In addition, spotted knapweed is listed on the Kansas' Invasive Weed Watch List because of its invasive characteristics and substantial problems it causes in neighboring states.

C. Indicate the economical or environmental impact of the pest (i.e., economic losses caused by the pest, mitigation costs, cost of the invasive species)

In 2016, there was 8.5 million acres of wheat, 4.9 million acres of corn, 4.05 million acres of soybeans, 3.1 million acres of sorghum, 2.6 million acres of forage, 120,000 acres of oats 63,000 acres of sunflowers and 25,000 acres of canola harvested in Kansas. In addition, the values of those crops were: corn was \$2.2 billion, soybeans was \$1.8 billion, wheat was \$1.5 billion, sorghum was \$699 million, hay was \$536 million, \$13 million was sunflowers, \$6.3 million was canola and \$3.2 million was oats. Control costs can range from \$9 to \$40 per acre depending in which crop the spotted knapweed is present. Preventing the spread of invasive species, like spotted knapweed, becomes a priority so that Kansas agriculture does not suffer. There are both economical and environmental impacts. Spotted knapweed can also out-compete native vegetation creating a monoculture that does not favor wildlife.

D. Describe the expected benefits of conducting the activities in the work plan

Surveying for spotted knapweed so a biological control organism can be released will provide a longer term solution for the control of spotted knapweed. In addition, this will aid in the implementation of an integrated weed management plan by combining the efforts of chemical, mechanical and biological control to result in better weed management than chemical alone.

RESULTS**A. What are the anticipated results and successes?**

- The project would include a spotted knapweed survey that would expand our knowledge of the extent of spotted knapweed in Kansas.

- Reduce the spread of spotted knapweed.
- Reduce the competitiveness of spotted knapweed so that native vegetation will have the chance to flourish.
- Establish an insectary for future releases.

B. Describe how results will:

1. Reduce mitigation costs of managing the pest

Reduce the control costs, which can range from \$9 to \$40 per acre depending in which crop the spotted knapweed is present. In addition, preventing the spread of spotted knapweed will reduce future economic impact.

2. Minimize negative impacts on non-targets

Larinus minutus and *Cyphocleonus achates* are approved by APHIS and has minimal non-target effect.

3. Establish biocontrol agents

Larinus minutus and *Cyphocleonus achates* will be released and then monitored over a few years in hopes of it providing an established population after survey sites are determined in 2018.

4. Reduce pest densities

Larinus minutes adults lay eggs on spotted knapweed flowers throughout the summer. The larva hatch, feeding on the developing seed. This reduces the production of new seed and thus after a few years, a reduction in the density of spotted knapweed. *Cyphocleonus achates* adults lay eggs at the base of the plant and the larva feed on the taproot of the plant. This feeding goes on through summer with adults emerging in mid-august. Working in combination, these insects have reduced spotted knapweed populations significantly.

C. Select which of the following OUTPUTS will be achieved by the termination date: (Select YES, NO, or N/A for each output) * N/A is non-applicable.

- | | | | |
|--|---|--|---|
| • New rearing techniques | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A * |
| • Effective or improved rearing techniques | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A |
| • New potential BC species identified, studied, or collected | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A |
| • Effective or improve field site evaluation techniques | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Effective or improve surveying techniques for pest or agent | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Effective or improve monitoring techniques for pest or agent | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Publications or educational material | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Training | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Other | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |

Explain here for Other:

For OUTPUTS selected as YES, provide a description:

- Either success or failure of biological control release will help improve field site selection criteria.

- We will be surveying the spotted knapweed infested area before and after biological control release.
- After the biological control release, we will monitor the site for *Larinus minutus* and *Cyphocleonus achates* plant injury symptoms and adults. In addition we will monitor the spotted knapweed density in the release area.

IV. APPROACH

Plan of Action for the proposed objectives - Describe the work to be performed under this work plan. The narrative is to include any information or data that will be shared with APHIS.

During the months of June and July of 2018, a northeast Kansas survey will occur to detect spotted knapweed. The timing of this survey will coincide with the flowering of spotted knapweed to make observing and identification less complicated. The survey will focus on areas that would be more likely to contain spotted knapweed. For example, the survey will focus on areas near already known infestations and counties that border states with known infestations. Locally, the surveyor will look for spotted knapweed in high consequence areas such as road ditches, hay meadows, hay storage facilities, etc. Thirty-four northeastern counties will be the focus of this survey. Information gathered will include: approximate area infested (if any), location (GPS coordinates), and cropping situation. Samples will be screened by:

Scott Marsh
State Weed Specialist
Kansas Dept. of Agriculture
Plant Protection & Weed Control
6531 SE Forbes Ave., Ste. B
Topeka, KS 66619-0282

Included with the structured survey, will be outreach and training curriculum provided to all Kansas county weed directors. Pamphlets on spotted knapweed identification will be emailed out in early summer, training weed directors and encouraging them to report any suspect infestations to the KDA.

In addition, during the month of July, 2019, a release of *Larinus minutus* will be conducted and in August, a release of *Cyphocleonus achates* will be conducted. *Larinus minutus* and *Cyphocleonus achates* will be obtained from a USDA approved insectary. Prior to any release, the density of spotted knapweed will be measured using a quadrat from the 2018 survey data. Separate measurements will be taken for rosettes and bolted plants. Late summer/early fall, spotted knapweed densities will be measured with a quadrat and there will be a survey to monitor the survival of *Larinus minutus* and *Cyphocleonus achates* adults using a sweep net. Even with the fall density measurement, it is expected that the main effect of *Larinus minutus* and *Cyphocleonus achates* on spotted knapweed may not be known for a number of years. All data from the survey, release, and monitoring will be taken with a GPS unit and analyzed in ArcGIS.

Information on Pest and biological control organism will be shared with APHIS by entering it into the NAPIS database.

B. Indicate which of the following activities will be performed:

(Select YES, NO, or N/A for each output) * N/A is non-applicable.

- | | | | |
|---|---|--|---|
| • Survey of pests | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A* |
| • Survey of BC agents | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Environmental release of BC agents | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • BC agent collection – offshore | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A |
| • BC agent collection – field | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A |
| • BC agent distribution from lab or insectaries | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Monitoring of pest | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Monitoring of BC agents | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Pre-release evaluation, development, or screenings of agent | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A |
| • Pre-release site selection and evaluation | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Post-release site evaluation | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Post-release evaluation of impacts on non-targets | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A |
| • Post-release evaluation of agent's efficacy | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Rearing of BC agents | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A |
| • Mapping of pest or BC agent | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Outreach or education | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Training | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Partnering or Networking | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Techniques or methods development | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Technology transfer | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Other | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |

Explain here for Other:

For Activities selected as YES, provide a description:

- Spotted knapweed will be surveyed in high risk areas.
- *Larinus minutus* and *Cyphocleonus achates* will be released in 2019, the 2nd year of this survey.
- Monitoring for the adult bio-control insect and the damage on knapweed will be performed.
- A site will be evaluated and selected based on spotted knapweed density, acreage, and ease of access for 2019 release.
- Information on spotted knapweed identification will be provided to all Kansas county weed directors. In addition Information on the release *Larinus minutus* and *Cyphocleonus achates* will be published on the KDA website and shared with the county weed directors of Kansas.
- The Kansas Department of Agriculture will partner with County Weed Departments in establishment of biological control site.

C. Contingencies - Include other approaches that will be considered if the work plan produces results sooner, later, or different than what you anticipate.

- Involve county weed directors to be involved in survey and results.

D. What is the quantitative projection of accomplishments to be achieved?

- Survey sites for spotted knapweed infestations for 2019 bio-control release during June and July.
- Map and analyze data using ArcGIS.
- Submit data to NAPIS and state survey database.
- Add information to KDA webpage and share information with Kansas county weed directors.

1. By activity or function, what are the anticipated accomplishments by month, quarter, or other specified intervals?

Month	Activity
June	Email informational pamphlets to weed directors
June-July	Survey for spotted knapweed
August - October	Enter data into NAPIS, map and make plan of action for release of bio-control in 2019

2. What criteria will be used to evaluate the project?

- All data collected from the biological control project is entered into the state survey database and NAPIS database.
- Maps of the biological control project activities are produced to aid in decision making, control measures, and management of this pest.
- State CAPS and KDA meetings to keep updated on issues.

3. What methodology will be used to determine if identified needs are met?

- Review of the accomplishment reports and maps.
- State CAPS and KDA meetings to keep updated on issues.

4. What methodology will be used to determine if Results and benefits are achieved?

- Final map and data collected that was originally set forth in work plan.
- Infestation maps are completed and final report is sent to USDA.

VI. RESOURCES**A. What resources are required to perform the work?**

- Temporary staff will be hired to perform the spotted knapweed survey in high risk areas.
- GPS unit to map, survey, and monitor release site.
- Rental vehicles are required travel to and from release site.
- Provided by Cooperator, office space with associated services and utilities, computers and other office equipment for the use of Cooperator personnel. These

include computer with GIS and internet service. Computers will be used for entering survey data into the state survey database and NAPIS database.

1. What numbers and types of personnel will be needed, and what will they be doing?

- One temporary staff will be hired to perform the spotted knapweed survey in higher risk areas.

2. What equipment will be needed to perform the work? Include major items of equipment with a value of \$5,000 or more.

- N/A

a. What equipment will be provided by the cooperator?

- N/A

b. What equipment will be provided by APHIS?

- N/A

c. What equipment will be purchased in whole or in part with APHIS funds?

- N/A

d. How will the equipment be used?

- N/A

e. What is the proposed method of disposition of the equipment upon termination of the agreement/project?

- N/A

3. Identify information technology equipment, e.g., computers, and their ancillary components. *All information technology supplies (e.g., small items of equipment, connectivity through air cards or high speed internet access, GPS units, radios for emergency operations etc.) should be specifically identified.*

- Computers with internet access
- GPS unit

4. What supplies will be needed to perform the work? Identify individual supplies with a cumulative value of \$5,000 or more as a separate item.

- N/A

a. What supplies will be provided by the Cooperator?

- N/A

b. What supplies will be provided by APHIS?

- N/A

c. What supplies will be purchased in whole or in part with APHIS funds?

- N/A

d. How will the supplies be used?

- N/A

e. What is the proposed method of disposition of the supplies with a cumulative value over \$5,000 upon termination of the agreement/project?

- N/A

5. What procurements will be made in support of the funded project and what is the method of procurement (e.g., lease, purchase)?
(Cooperator procurements shall be in accordance with OMB Circulars A-102 or A110, as applicable.)

- GPS unit
- Bags for taking knapweed samples
- The Fiscal Department at the Kansas Department of Agriculture will handle most contracts.
- Most procurements will be made by purchase.

6. What are the travel needs for the project?

- Travel will be required to survey sites by use of a KDA or rental vehicle. The KDA Plant Protection and Weed Control Plant Program Manager is the approving official. Costs are included in the financial plan.

a. Is there any local travel to daily work sites? Who is the approving official? What are the methods of payment? Indicate rates and total costs in the Financial Plan.

- Travel will be required to biological control or survey sites by use of a rental vehicle.
- The KDA Plant Protection and Weed Control Plant Program Manager is the approving official. Costs are included in the financial plan.
- The Fiscal Department at the Kansas Department of Agriculture will handle most contracts.
- Most procurements will be made by purchase.

b. What extended or overnight travel will be performed (number of trips, their purpose, and approximate dates). Who is the approving official? What is the method of payment? Indicate rates and total cost in the Financial Plan.

- The KDA Plant Protection and Weed Control Plant Program Manager is the approving official. Costs are included in the financial plan.
- The Fiscal Department at the Kansas Department of Agriculture will handle payment.

7. Are there any other contributing parties who will be working on the project?☒ YES ☐ NO

If YES, answer below:

a. List Participating Agency/Institution:

- KDA Plant Protection and Weed Control
- County Weed Departments

b. List all who will work on the project:

- KDA Plant Protection and Weed Control
- County Weed Departments

c. Describe the nature of their effort:

- KDA will perform the site selection.
- County Weed Departments will help with survey site selection.

d. Contribution:

- KDA will perform the site selection.
- County Weed Departments will help with survey site selection.

VII. GEOGRAPHIC LOCATION OF PROJECT**A. Is the project statewide or in specific counties, townships, and/or national or state parks? (List all that apply)**

The surveys and release sites will be in 34 counties in the northeastern portion of the state where most of the known populations of spotted knapweed exist and will include Anderson, Atchison, Brown, Chase, Clay, Cloud, Coffey, Dickinson, Doniphan, Douglas, Franklin, Geary, Jackson, Jefferson, Johnson, Leavenworth, Linn, Lyon, Marion, Marshall, McPherson, Miami, Morris, Nemaha, Osage, Ottawa, Pottawatomie, Republic, Riley, Saline, Shawnee, Wabaunsee, Washington and Wyandotte Counties. The full extent of the survey may expand beyond the anticipated area if populations of spotted knapweed are found along the western or southern borders of the planned survey area.

B. What type of terrain (e.g., cropland, rangeland, woodland) will be involved in the project?

The release site contains cropland and rangeland.

C. Are there any unusual features which may have an impact on the project or activity such as rivers, lakes, wildlife sanctuaries, commercial beekeepers etc? (list all that apply)

None.

D. Are there tribal lands in proximity to the project area that may be impacted, positively or negatively, by the project?

The Pottawatomie Reservation is located in Jackson County, the Iowa Reservation is in Doniphan County and the Kickapoo and Sac and Fox Reservations are in Brown County.

VIII. DATA COLLECTION AND MAINTENANCE**A. What type of data will be collected and how will it be maintained?**

- Data collection will be both electronic (data points from a GPS) and visual. The data will be put into NAPIS, the state data base and in a spreadsheet for further utilization in pamphlets and field monitoring.

B. Address timelines for collection, recording, and reporting of data.

All survey data from Pest Detection funded CAPS surveys will be entered into the National Agricultural Pest Information System (NAPIS). NAPIS is the final repository for all Pest Detection survey data.

- First record for the State and/or County will be entered within **48 hours** of confirmation of identification by a qualified identifier.
- All other required records, both positive and negative survey data, must be entered **within two weeks** of confirmation.
- All records are to be entered into the NAPIS database by **December 31st** of the year of survey so these data can be included in the yearly Plant Board Report.

C. How will APHIS be provided access to the data?

- Data is available through NAPIS access.
- Data is available through KDA.

D. Identify if the data collected relate to the following measures.

* *N/A is non-applicable.*

- | | | | |
|---|---|--|---|
| • The number of BC species that become established and sustainable | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A* |
| • The number of BC programs that are developed, implemented, or transferred to States or others | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Total number of sites that are managing targeted pests using biocontrol | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Total number of new agents identified, studied, or imported | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A |
| • Total number of pre-release and site evaluations, or surveyed | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Total number of sites monitored | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Successful development of rearing and release technology | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A |
| • Number of eligible sites with targeted pests participating in biocontrol | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Number of targeted pests managed using biocontrol | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Number of publications, presentations, databases, and educational material | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A |
| • Number of agent colonies or insectaries created | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Time of monitoring released BC agents in the field | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Cost operating rearing laboratories | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A |
| • Total number of BC individuals reared | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A |
| • Total number of BC individuals released | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |
| • Cost of BC individual reared | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A |
| • Cost of BC individual released | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> N/A |

For data variables selected as YES, provide a description:

- *Larinus minutus* and *Cyphocleonus achates* will be released for biocontrol in 2019 where spotted knapweed is found to exist in 2018.
- Pre-release and site evaluation will occur at the site or sites determined to be the release sites. A survey will take place to identify new populations of spotted knapweed.
- Selected sites with targeted pests will participate in biocontrol releases.

E. All survey data from federal cooperative agreements involving pest surveys, will be entered into an APHIS, PPQ approved database. The State Plant Health Director, or his/her designee, is responsible for assuring data quality.

1. If using NAPIS database.

a. First record for the State and/or County will be entered within 48 hours of confirmation of identification by a qualified identifier.

All biological control data from cooperative agreements involving pest surveys will be entered by the State Survey Coordinator or KDA staff into the state survey database and NAPIS database.

b. All other required records, both positive and negative survey data, must be entered within two weeks of confirmation.

All survey data from Pest Detection funded CAPS surveys will be entered into the National Agricultural Pest Information System (NAPIS). NAPIS is the final repository for all Pest Detection survey data.

- First record for the State and/or County will be entered within **48 hours** of confirmation of identification by a qualified identifier.
- All other required records, both positive and negative survey data, must be entered **within two weeks** of confirmation.
- All records are to be entered into the NAPIS database by **December 31st** of the year of survey so these data can be included in the yearly Plant Board Report.
- Survey data will be collected with GPS technology for internal pathway analyses.
- Survey maps will be developed from approved GIS mapping software.

VIII. Reporting instructions:

A. Submit all reports to the APHIS Authorized Department Officer's Designated Representative (ADODR). Reports include:

1. Narrative accomplishment reports in the frequency and time frame specified in the Notice of Award, Article 4.

2. Financial Status Reports, SF-269, in the frequency and time frame specified in the Notice of Award, Article 4.
3. Standard Reporting Form for Biological Control Cooperative Agreements

SIGNATURES

ROAR

Date

ADODR

Date

Detailed Financial Plan

PROJECT: Spotted Knapweed (*Centaurea stoebe* L.) Survey for Biological Control

COOPERATOR NAME: Kansas Department of Agriculture

AGREEMENT NUMBER: USDA-APHIS-10025-PPQFO000-18-0068

TIME PERIOD: January 1, 2018-December 31, 2018

Financial Plan must match the SF-424A, Section B, Budget Categories

ITEM			APHIS FUNDS	COOPERATOR FUNDS (Show even if zero)	TOTAL
PERSONNEL:	Hours	Salary			
KDA staff - Paid by Cooperator funds (based on average hourly wage for permanent employees)	20	\$25	0	\$500	\$500
Subtotal			0	\$500	\$500
FRINGE BENEFITS:	Percent (enter as decimal not %)	Salary			
KDA staff - Paid by APHIS funds - 33%	0.33	\$500	0	\$165	\$165
Subtotal			0	\$165	\$165
TRAVEL:	Cost	Length of time			
SUV rental for temporary staff for 2 months @ \$979/month (shortage in state vehicles) *	\$979	2	\$1,958	\$0	\$1,958
Subtotal			\$1,958	0	\$1,958
EQUIPMENT:					
Subtotal			0	0	0
SUPPLIES:					
Fuel – 3,580 miles/month x \$2.50 per gallon/20 mpg for rental vehicles*	\$448	2	\$896	\$0	\$896
GPS unit			\$150	0	\$150
Sample bags			\$50	0	\$50
Subtotal			\$1,096	0	\$1,096
CONTRACTUAL:	Cost	Length			

		of time			
Key Staffing (1 temporary staff) \$20.00 x 320 hours	20	320	\$6,400	0	\$6,400
Subtotal			\$6,400	0	\$6,400
OTHER:					
Subtotal			0	0	0
TOTAL DIRECT COSTS			\$9,454	\$665	\$10,119
INDIRECT COSTS	Percent (enter as decimal not %)				
(18.1% on Total Direct Cost of salary and fringe benefits)*	0.181	\$665	0	\$120	\$120
TOTAL			\$9,454	\$785	\$10,239
Cost Share Information			87%	13%	

* There is a shortage of state vehicles. We give the option of renting a vehicle or using personally owned vehicles.

- If renting we pay for the fuel and if a personal vehicle is used we pay mileage.

** Kansas' Negotiated Cost Rate (Salary + Fringe Benefits x % = Indirect Cost)